REMARKS

Claims 1-19 are all the claims pending in the application. The claims have been amended to make them broader by eliminating potentially narrowing parenthetical elements. These amendments are also respectfully submitted to alleviate the potential indefiniteness pointed out by the Examiner, and therefore Applicant respectfully requests the Examiner to withdraw the rejection under 35 U.S.C. § 112.

Applicant respectfully requests the Examiner to withdraw the objection to the title and the Abstract of the Disclosure in view of the self-explanatory amendments shown in the enclosed Appendix and above.

Claims 1-8, 9-14, 17-19 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Ishida et al (US Patent Number 5,926,466) in view of Barnett et al. (US Patent Number 6,313,719 B1).

Applicant respectfully traverses this prior art rejection.

The U.S. filing date of the present application is January 20, 2000. The U.S. filing date of the Barnett patent is March 9, 2000. Since the U.S. filing date of the present application precedes that of Barnett, the Barnett patent is not prior art with respect to the present application.

Since this prior art rejection is not based on valid prior art, Applicant respectfully requests the Examiner to reconsider the rejection, and to withdraw it.

Claims 15-16, are rejected under 35 U.S.C. § 103(a) as being unpatentable over Ishida et al. (US Patent Number 5,926,466) and Barnett et al. (US Patent Number 6,313,719) in view of Caille et al. (US Patent Number 6,222,493 B1).

As pointed out above, Barnett is not prior art, and this rejection too is moot in view thereof. The Examiner's kind reconsideration of this rejection is thus respectfully requested.

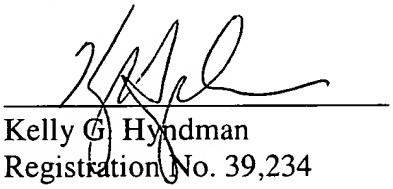
For the sake of facilitating the final disposition of this application, Applicant respectfully points out that the Caille patent also is not prior art for reasons which the Examiner will readily grasp with a quick glance at the faceplate of that patent, keeping in mind that the present application has the benefit of at least the filing date of May 10, 1999 (the PCT filing date), and

may be entitled to benefit from the foreign priority date of May 15, 1998 once the claim to this benefit is perfected, if this becomes necessary.

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner may feel free to contact the undersigned attorney at the telephone number listed below.

Applicant hereby petitions for any extension of time which may be required to maintain the pendency of this case, and any required fee, except for the Issue Fee, for such extension is to be charged to Deposit Account No. 19-4880.

Respectfully submitted,



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APPENDIX

VERSION WITH MARKINGS TO SHOW CHANGES MADE

IN THE TITLE:

The title is changed as follows:

[A CIRCUIT FOR AND A METHOD OF RECEIVING OR TRANSMITTING MICROWAVES] MICROWAVE CIRCUIT WITH PLANAR FILTER

IN THE CLAIMS:

The claims are amended as follows:

1. (Amended) A circuit for receiving [(or transmitting)] microwaves, the circuit comprising:

radiating means [(60; 74; 80; 144)] for receiving [(or transmitting)] microwaves,

filter means for eliminating microwaves transmitted [(or received)] at different frequencies by the radiating means, [and]

means for amplifying received [(or transmitted)] microwaves, and [characterized in that it includes]

the filter means and means for amplifying being at least two filter and amplifier stages [(150, 152, 158, 160; 182, 184, 190, 192)] connected to the radiating means,

the filter stages [and respectively] comprising a planar filter [(150, 158; 182, 190) whose] and the amplifier stages comprising an amplifier,

wherein:

the planar filter has, as a rejectivity for transmit [(or receive)] frequencies, [is] a fraction [, preferably a small fraction,] of the total rejection needed to eliminate the transmit [(or receive)] frequencies, [and an]

the amplifier [(152, 160; 184, 192) whose] has, as a gain, [is] a fraction of the total gain of the circuit, and

said filter and <u>said</u> amplifier stages [applying] <u>apply</u> progressive filtering and amplification.

2. (Amended) A circuit according to claim 1, characterized in that the planar filter [(150; 182)] of the first [(or last)] stage [(150, 152; 182, 184)] is connected directly to the radiating means.

3. (Amended two times) A circuit according to claim 1, characterized in that the attenuation of the filter [(150; 182)] of the first [(or last)] stage [(150,152; 182, 184)] and the gain of the amplifier [(152; 184)] of that stage have values such that the amplifier is not delinearized by residual transmit [(or receive)] signals not eliminated by the associated filter.

4. (Amended two times) A circuit according to claim 1, characterized in that the total rejectivity needed to eliminate the transmit [(or receive)] frequencies is in the order of 50 dB and the rejectivity of the filter [(150; 182)] of the first [(or last)] stage [(150, 152; 182, 184)] is in the order of 14 dB.

5. (Amended two times) A circuit according to claim 1, characterized in that the amplifier [(152; 184)] of the first [(or last)] stage [(150, 152; 182, 184)] comprises at least one transistor, that stage is of hybrid form and the transistor comprises a semiconductor die with no packaging disposed on the substrate on which the planar filter is implemented.

6. (Amended) A circuit according to claim 5, characterized in that the stage [(158, 160; 190, 192)] farthest from the radiating means is in the form of an integrated circuit, for example an MMIC.

7. (Amended) A circuit according to claim 6, characterized in that the radiating means are mobile, the first [(or last)] stage [(150, 152; 182, 184)] is also mobile and the stage implemented in the form of an integrated circuit is immobile.

8. (Amended two times) A circuit according to claim 1, characterized in that the substrate for the planar filter [(150; 182)] of the first [(or last)] stage [(150, 152; 182, 184)] has a matrix of a flexible organic material such as PTFE.

10. (Amended two times) A circuit according to claim 1, characterized in that it includes three filter and amplifier stages [(152, 154, 156, 158, 160; 182, 184, 186, 188, 190, 192)] and the filter [(158; 190)] farthest from the radiating means has a higher attenuation than the filters of the other two stages.

11. (Amended two times) A circuit according to claim 10, characterized in that the intermediate filter and amplifier stage [(152, 154; 186, 188)] is in hybrid form with a transistor comprising a semiconductor die with no packaging disposed on the substrate on which the planar filter is implemented.

12. (Amended) A circuit according to claim 11, characterized in that the intermediate stage and the first [(or last)] stage [(150, 152; 182, 184)] are made on the same substrate.

13. (Amended two times) A circuit according to claim 1, characterized in that the amplifier [(152; 184)] of the first [(or last)] stage [(150, 152; 182, 184)] includes a field effect transistor [(208)] and in that a connecting wire [(220)] connected to the source forms a feedback inductor with a value chosen to minimize noise.

18. (Amended) A method of receiving [(or transmitting)] microwaves via radiating means, in which method filtering eliminates microwaves transmitted [(or received)] at different frequencies by the radiating means and the waves received [(or to be transmitted)] are amplified, characterized in that the filtering and amplification are progressive, the first [(or last)] filtering stage, starting from the radiating means, uses a planar filter whose rejectivity is a small fraction of that needed to eliminate transmit [(or receive)] frequencies throughout the corresponding system and the first [(or last)] stage amplifier gain is a small fraction of the total necessary gain.

19. (Amended) A method according to claim 18, characterized in that the rejectivity of the first [(or last)] filter stage is determined as a function of the compression point of the amplifier [(152; 184)] of the first stage [(150, 152; 182, 184)] [(or of the noise factor of the last stage of amplification)], the power to be transmitted and the isolation between the two ports of the radiating means.

IN THE ABSTRACT OF DISCLOSURE:

The abstract is changed as follows:

The invention relates to a circuit for receiving for transmitting microwaves, the circuit comprising radiating [means] elements (144) for receiving (or transmitting) microwaves, filters [filter means] for eliminating microwaves transmitted (or received) at different frequencies by the radiating [means] elements, and [means for amplifying] amplifiers for the received (or transmitted) microwaves. The circuit includes a first (or last) stage (150, 152; 182, 184), connected to the radiating [means comprising] elements, having a planar filter (150; 182) whose rejectivity for transmit (or receive) frequencies is a fraction, preferably a small fraction, of the total rejectivity needed to eliminate transmit (or receive) frequencies, and an amplifier (152; 184) whose gain is a fraction of the total gain of the circuit. The planar filter of the first (or last) stage

is preferably connected directly to the radiating [means] elements. The noise seen by the radiating [means] elements is minimized.